Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2009-06-30
Date of Last Change to Activities: 2012-08-23
Investment Auto Submission Date: 2012-02-27
Date of Last Investment Detail Update: 2012-02-24
Date of Last Exhibit 300A Update: 2012-08-23
Date of Last Revision: 2012-08-23

Agency: 021 - Department of Transportation **Bureau:** 12 - Federal Aviation Administration

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: FAAXX159: Voice Switching and Control System (VSCS) Tech Refresh

2. Unique Investment Identifier (UII): 021-147277724

Section B: Investment Detail

1. **Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

Voice switches enable air traffic controllers to transition efficiently between air-to-ground radio communication and ground-to-ground telephone communication. The Voice Switching Control System (VSCS) technology has been deployed since 1994 to provide air traffic controllers in en route facilities with this connectivity. The VSCS is operational but we are currently executing the Phase II Tech Refresh. VSCS supports the FAA goals of modernizing air traffic control, improving runway safety, improving safety requirements for long-range flights and enhancing air tour safety. The goal of Tech Refresh is to address parts obsolescence issues that would affect VSCS availability. The VSCS system was scheduled to be in the inventory until 2014, but is now expected to be operational until a new switch is fielded in 2027. Phases I (10/1/1999 - 9/30/2006) and II (10/1/2006 - 9/30/2011) of the VSCS Tech Refresh program were presented to the JRC for a final baseline decision on August 24, 2006. This decision was to obtain funding for the execution of Tech Refresh Phase II, lasting from FY2007 through FY2014. The funds that were approved and allocated in the Phase II time period will provide the following: Continuing retrofit of power supplies; System Enhanced Technician Diagnostics improvements; VTC VTABS Test Controller Redesign; PLM to C+++ Conversion, Technical Analysis; Program Management and Contract Support. An additional $1M of F&E funds have been approved by the FAA Capital Investment Team for FY12 to perform analyses for the purpose of determining specifics for Tech Refresh (Phase III)

projects that is expected to be completed by 2021. A new investment of $70M is included in the BY13 projection in order to plan, design, develop and implement a Phase III Tech Refresh. At this stage, the projects that are being reviewed for Phase III are Cutover Switch Reconfiguration, Life of Type Spares Purchases, VTABS Replacement, Virtual VAX, VTABS PECO Tech Refresh, VTABS Sustainment Tech Refresh, Government Inventory Refurbishment, VEM/PEM Test Set Tech Refresh, VSCS Control Subsystem Tech Refresh and Liebert Power Conditioner Tech Refresh. Some of these investments are mutually exclusive and the final decision on the best approach will occur in BY12. The Tech Refresh investment, for program management tracking purposes, is from October 1, 1999 to planned completion September 30, 2020. This program has dependencies with the NEXCOM, FTI, ERAM and NVS programs.

2. **How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.**

The VSCS has been in operation for approximately eighteen years and with the advance of associated technology, obsolescence issues are progressively creating operational risk. Before this risk becomes unmanageable, an update to the latest technology will allow the access to readily available components and equipment needed to support the system. The VSCS system is required to support the FAA goals of modernizing air traffic control, improving runway safety, improving safety requirements for long-range flights and enhancing air tour safety. With the implementation of Phase III Tech Refresh the DOT Strategic Plan and FAA Destination 2025 goals should be met. Lack of full funding for this investment will increase the risk of operational obsolescence to the point that it may become unmanageable.

3. **Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.**

The PLM to C Software Conversion Ground to Ground Switch Systems Test was completed in November 2010 and the PLM to C Software Conversion VSCS Console Equipment Integration Baseline 2 milestone completed in July 2011. This will lead to the update of the associated software for compatibility with available Technician skills and current Tech Refresh commercial off the shelf components and equipment. The VTABS (PECO) Power Supply update was accomplished in June of 2011 by purchasing a life of type buy of major components that will allow the maintenance of the system to continue to 2027 without interruption. It was determined that the replacement of the system would present unacceptable risks of incompatibility with interfacing VSCS equipment. The Enhanced Technician Diagnostics improvements that were detailed after the BY2006 JRC Phase II funding approval have completed in July 2011. These improvements will allow for site personnel to better identify the source of system failures.

4. **Provide a list of planned accomplishments for current year (CY) and budget year (BY).**

The PLM to C Software Conversion Ground to Ground Switch Deployment is on track and scheduled to complete in BY12. This will update the associated software for compatibility with available Technician skills and current Tech Refresh commercial of the shelf components

and equipment. PLM to C Software Conversion VSCS Console Equipment milestones that are expected to complete in BYs 12 and 13 are Integration Baseline 3, Baseline Design Review 2, System Testing and Key site Field Testing. This will lead to the update of the associated software for compatibility with available Technician skills and current Tech Refresh commercial off the shelf components and equipment. The completion of Power Supply Refurbishment Test Equipment and Waterfall Unit manufacturing are scheduled to complete in BY2012. These two milestones are required prior to the Prime Contractor's starting the Continued Power Supply Refurbishment Retrofit which will eliminate the obsolescence issues and risks currently being experienced with the Console Equipment and Common Switch Power Supplies. VTABS Test Controller Replacement is scheduled to complete in BY13. This will allow for the originally intended functionality to be obtained and to eliminate software unstableness and obsolescence issues.

5. **Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.**

2006-08-24

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	$41.2	$5.3	$1.0	$2.3
DME (Excluding Planning) Costs:	$156.7	$9.7	$0.0	$12.8
DME (Including Planning) Govt. FTEs:	$19.7	$0.7	$0.2	$1.0
Sub-Total DME (Including Govt. FTE):	$217.6	$15.7	$1.2	$16.1
O & M Costs:	$326.2	$43.0	$46.9	$51.9
O & M Govt. FTEs:	$9.1	$0.8	$0.9	$0.9
Sub-Total O & M Costs (Including Govt. FTE):	$335.3	$43.8	$47.8	$52.8
Total Cost (Including Govt. FTE):	$552.9	$59.5	$49.0	$68.9
Total Govt. FTE costs:	$28.8	$1.5	$1.1	$1.9
# of FTE rep by costs:	25	8	6	11
Total change from prior year final President's Budget ($)		$0.0	$0.0	
Total change from prior year final President's Budget (%)		0.00%	0.00%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value ($M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded		DTFAWA-07-C-00014									
Awarded		DTFAWA-07-C-00014									
Awarded		DTFAWA-07-C-00014									
Awarded		DTFAWA-07-C-00014									
Awarded		DTFAWA-07-C-00014									
Awarded		DTFACT-09-D-00012									
Awarded		DTFACT-09-D-00012									
Awarded		DTFACT-09-D-00012									
Awarded		DTFAWA-07-C-00014									
Awarded		DTFAWA-03-C-0071									
Awarded		DTFAWA-09-C-00012									
Awarded		DTFAWA-11-D-00051									

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:
The activities identified with an N, are level of effort activities that involve ad hoc tasking and the specifics of daily activities cannot be projected with any reasonable degree of accuracy.

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-08-23

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost ($M)
A	A - Ground to Ground Switch Programming Language for Microcomputers to C Conversion (G/G PLM2C)	Convert Legacy SW to Current Language.			
B	B - VSCS Console Equipment Programming Language for Microcomputers to C Conversion (VCE PLM2C)	Convert Legacy SW to Current Language.			
C	C - Power Supply Refurbishment (PSR)	Eliminate obsolete components.			
D	D - VTABS Test Controller Replacement (VTC-R)	Establish originally intended functionality and eliminate SW instability.			
E	E - VSCS Control Subsystem (VCSU) Commercial Off the Shelf (COTS) Upgrade (VCSU/COTS-U)	Correct Anomalies Identified in Field Test Discrepancy Reports.			
F	F - Phase II Tech Refresh Program Management and F&E Maintenance Activities	FAA Full Time Equivalents, Prime Contractor PM, Support Contractors and Engineering Analysis Maintenance Activities.			
G	G - Planning For Future Segments	Analyze Phase III Tech Refresh Requirements to Extend VSCS to			

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost ($M)
		2027.			
H	H - Enhanced Technician Diagnostic Software	Enhanced Technician Diagnostic Software to improve technician efficiency and reduce unnecessary maintenance actions.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
A	A - Ground to Ground Switch Programming Language for Microcomputers to C Conversion (G/G PLM2C)							
B	B - VSCS Console Equipment Programming Language for Microcomputers to C Conversion (VCE PLM2C)							
C	C - Power Supply Refurbishment (PSR)							
D	D - VTABS Test Controller Replacement (VTC-R)							
E	E - VSCS Control Subsystem (VCSU) Commercial Off the Shelf (COTS) Upgrade (VCSU/COTS-U)							
F	F - Phase II Tech							

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
	Refresh Program Management and F&E Maintenance Activities							
G	G - Planning For Future Segments							
H	H - Enhanced Technician Diagnostic Software							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
B	VSCS Console Equipment Programming Language for Microcomputers to C Conversion (VCE PLM2C) Integration Baseline 2 (S-26)	Baseline 2 Provisioning Technical Documentation Delivered	2011-07-26	2011-07-26	2011-07-29	116	-3	-2.59%
H	Enhanced Technician Diagnostic Software	Provide field familiarization to technicians at 4 remaining ARTCCs (APB)	2011-07-31	2011-09-22	2011-09-29	152	-60	-39.47%
D	VTABS Test Controller Replacement (VTC-R) Baseline 1 Code Development (S-27)	Swap out refurbished units for legacy units	2011-09-02	2011-09-02	2011-09-26	115	-24	-20.87%
E	VSCS Control Subsystem (VCSU) Commercial Off the Shelf (COTS) Upgrade	Site Preparation, Installation, Test, and Activation	2012-01-04	2012-01-04	2012-01-12	187	-8	-4.28%

Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
	(VCSU/COTS-U) Baseline Integration 3 Test (S-31)							
B	VCE PLM2C Integration Baseline 3 (S-26)	Baseline 3 Provisioning Technical Documentation Delivered	2012-02-14	2012-02-14	2012-02-14	202	0	0.00%
C	Power Supply Refurbishment (PSR) Test Set - Test Development through Final Build of Test Equipment (3ea) (S-33)	Final Build of Test Equipment	2012-02-21	2012-08-17		244	-192	-78.69%
A	Ground to Ground Switch Programming Language for Microcomputers to C Conversion (G/G PLM2C) Deployment 50% Complete (S45)	Site Preparation, Installation, Test, and Activation	2012-03-20	2012-01-31	2012-01-24	171	56	32.75%
C	PSR Qualification Testing and Build of 102 Waterfall Units (S-33)	Delivery of Test Equipment Required to Start Site Deliveries and Swap outs	2012-03-31	2012-03-31	2012-01-25	275	66	24.00%
C	PSR First Delivery for WJHTC (S-45)	Delivery of Waterfall Units Required to Start Site Deliveries and Swap outs	2012-04-13	2012-08-16		80	-140	-175.00%
D	VTC-R Baseline Design Review Complete (S-31)	Interim Code baseline completed and tested	2012-04-18	2012-05-11	2012-05-11	230	-23	-10.00%
B	VCE PLM2C Integration Baseline Design Review 2 (S-26)	Baseline Design 2 Technical Documentation Delivered	2012-07-03	2012-06-29	2012-06-29	139	4	2.88%
A	G/G PLM2C Deployment 100% Complete	Site Preparation, Installation, Test, and Activation (APB)	2012-09-30	2012-06-30	2012-06-07	193	115	59.59%

Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
	(S45)_(APB)							
E	VCSU COTS-U Key Site Field Testing (S-37)	Interim Code baseline completed and tested	2012-10-01	2012-10-02		270	-1	-0.37%
B	VCE PLM2C System Testing (S-35)	Formal Testing to verify the SW conforms to all contract specfications	2013-02-27	2013-02-27		238	0	0.00%
D	VTC-R Deployment (S-45)	Baseline Code Functions as Designed	2013-03-20	2012-09-18		335	183	54.63%

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Number of Depot inoperable units arriving at the Operational Field Sites in response to a requisitioning request. (5 or less DOA's per month).	Single Requisition	Technology - Reliability and Availability	Under target	5.000000	5.000000	0.500000	5.000000	Monthly
Growth in the number of Site Depot Requisitions (includes DRSS Test Lab, Tech Center Test Lab and FAA Academy Trainer) because of failed Line Replaceable Units (LRUs).	Percent	Technology - Information and Data	Under target	10.200000	10.000000	8.300000	10.000000	Semi-Annual
Air Trafiic Delays due to VSCS outages (hours/ year delays among the eight largest metro areas) (117 total for baseline year; measure it semiannually)	Outage Hours	Customer Results - Timeliness and Responsiveness	Under target	117.000000	59.000000	0.000000	59.000000	Semi-Annual
Customer satisfaction from field personnel (technicians, system specialists).	Average score of customer satisfaction survey	Customer Results - Service Quality	Over target	3.000000	3.000000	4.570000	3.000000	Semi-Annual
Operational Site availability given increasing capacity	NASPAS availability percentage	Technology - Reliability and Availability	Over target	0.999000	0.997000	0.999810	0.999700	Semi-Annual